

# Forfás Submission on the Energy Green Paper

Forfás Submission to the  
Department of Communications,  
Marine and Natural Resources

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## Introduction

Forfás welcomes the Department of Communications, Marine and Natural Resources' (DCMNR) Energy Green Paper, Towards a Sustainable Energy Future for Ireland. It provides a comprehensive review of the range and magnitude of the energy challenges Ireland faces in both the immediate and longer term.

The Green Paper is very opportune as the increases in Ireland's energy costs and risks on the supply side are potentially significant barriers to future growth. Ireland is now one of the most expensive in the EU for energy, compared with our position of one of the most competitive less than seven years ago. The price of electricity in Ireland has gone from 15 percent below the EU-15 average in 1996 to 13 percent more expensive in 2006. Inflation in electricity costs in Ireland averaged 5.1 percent per annum over the decade to 2006, significantly higher than the EU as a whole (1.85 percent). The policy and regulatory framework for energy in Ireland requires radical reform to ensure security of supply, competitiveness and sustainability for the future.

## Energy and Industrial Competitiveness

A reliable and competitively priced supply of electricity remains as important as ever for enterprise development and is a vital ingredient in Ireland's international competitiveness and long term economic development.

A particular concern from an enterprise policy perspective is the capacity of the energy market to meet not only the needs of existing energy sensitive industries but also the needs of multinational companies considering locating operations in Ireland. Ireland's ability to continue attracting high levels of foreign direct investment and to provide a supportive environment for Irish industry generally will depend on its capacity to deliver a secure and uninterrupted energy supply at a competitive cost.

It is important, at the outset, to assess the sensitivity of Irish industry to global energy developments and future energy price changes.

### Recent Energy Consumption Trends

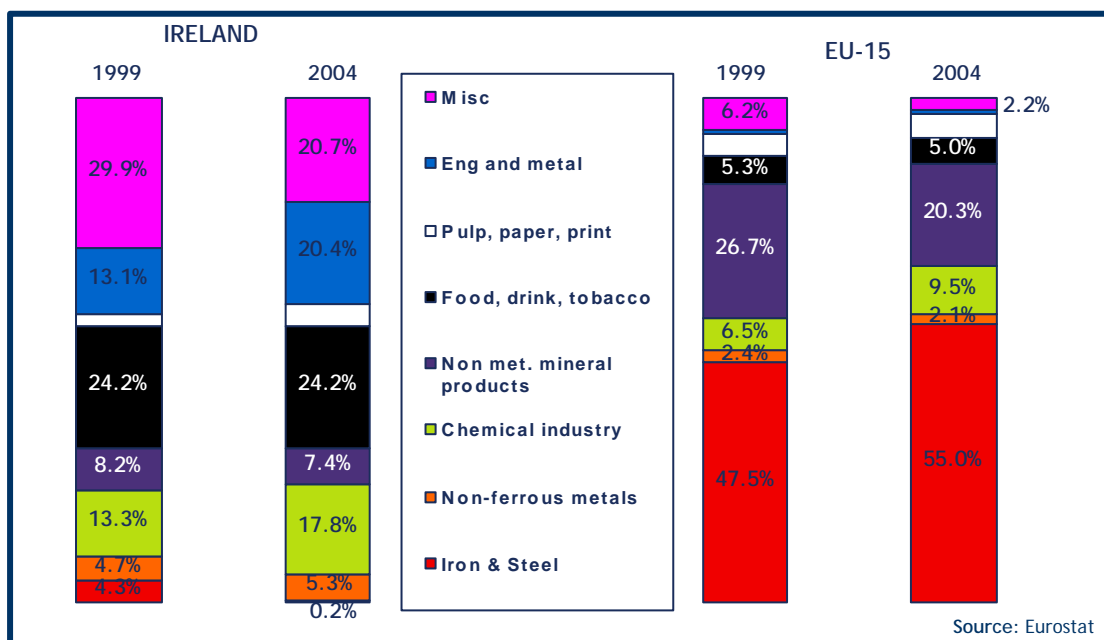
- The period, 1990-2004, saw a large increase (64.2 percent) in final energy demand as a result of strong economic growth. The fastest growing sector was transport which rose by 132 percent;
- The services sector also recorded a substantial increase, 69.5 percent, in its energy demand while industry grew by a more modest 25.3 percent between 1990 and 2004, and actually declined by 1.1 percent in the period 2000-2004; and
- Industry's share of total energy demand declined from 23.9 percent to 18.3 percent between 1990 and 2004.

### Forecast Energy Consumption Trends

- SEI has forecast energy demand growth of 43.6 percent in the period, 2005 to 2020 (compared to a 64 percent increase in the previous 15 years);
- Growth of almost 50 percent is forecast for both the industry and transport sectors but the average annual rate of growth is expected to decline over the period, 2005-2020; and
- Energy demand by the commercial/public services sector is forecast to rise by 47 percent between 2015 and 2020 with the average annual growth rate declining over the 15 year period from 3.6 percent per annum during 2005-2010 to 1.8 percent per annum in the period, 2015-2020.

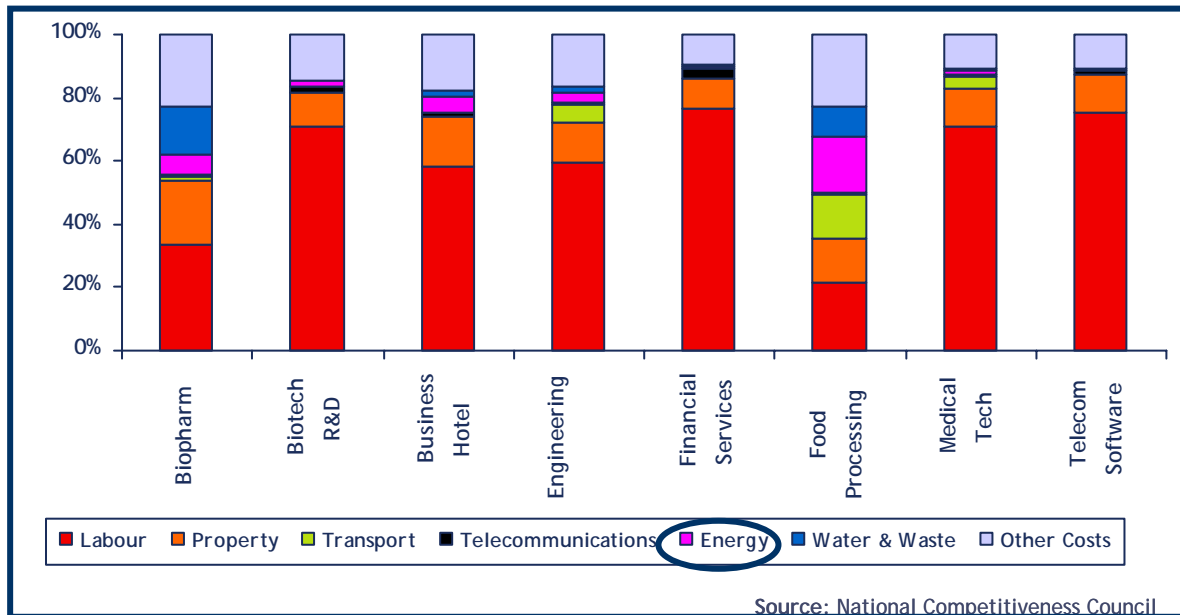
Industry's energy demand by sector in Ireland differs considerably from that of the EU-15 (Figure 1). Historically, Ireland has not had a large presence of what are generally regarded as energy intensive industries (e.g. iron and steel). However, the largest energy consumers in Ireland are the Food, Drink & Tobacco sector followed by the Engineering & Metals and Chemical sectors, which are among the strategically most important sectors in the Irish economy.

Figure 1: Industry's Energy Consumption by Sector, Ireland vs. EU-15, 1999 vs. 2004



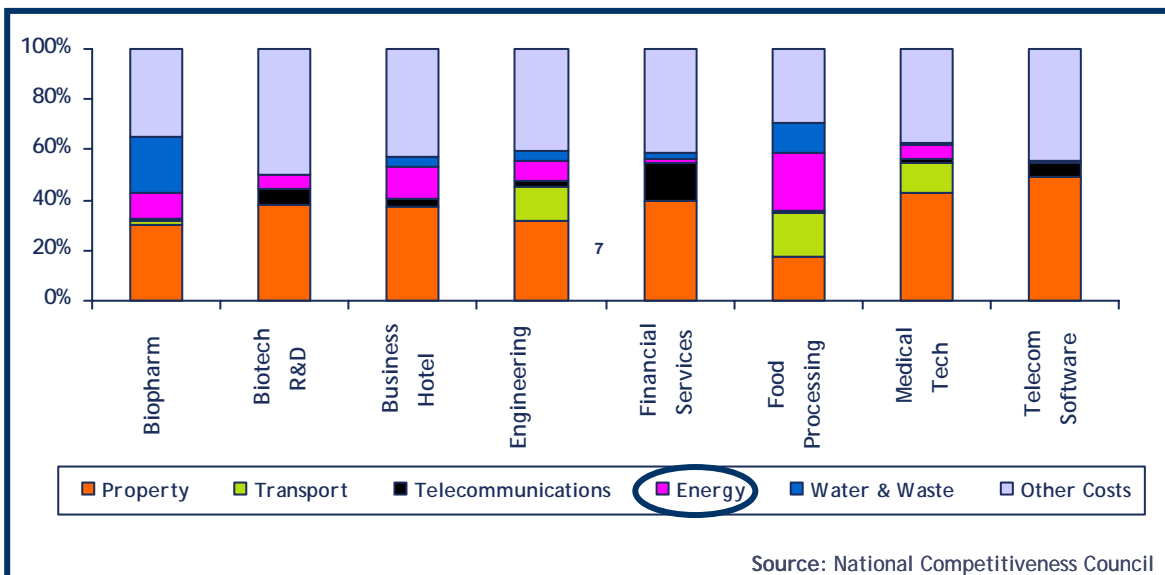
While Irish firms no longer compete in global markets based on low wages, cost competitiveness remains critical to ensuring that Irish companies have the ability to compete in international markets. The NCC's recently published report, Cost of Doing Business Study, provides a breakdown of the costs profile for a 'typical' firm across eight sectors (Figure 2). Caution, though, should be exercised when drawing inferences from the data as Figure 2 is based on a breakdown of cost profiles for a 'typical' firm in each sector. Energy expenditure as a share of total costs is largest in the "typical" Food firm.

Figure 2: Cost Profile of a "Typical" Firm by Sector, 2006



When labour costs are excluded, energy expenditure as a share of total costs is still largest in the "typical" Food firm (Figure 3). It is also a significant cost for Biopharma, Business Hotels, Engineering and Medical Technology firms.

Figure 3: Cost Profile (Excluding Labour Costs) of a "Typical" Firm by Sector, 2006



An energy survey of 120 firms conducted by IBEC in 2005 found that 72 percent of respondents were of the view that increases in energy costs were putting them at a disadvantage relative to other markets. Security of supply was a cause of concern for 54 percent of respondents.

## Energy Priorities for Enterprise

A reliable and competitively priced supply of electricity is the most important issue for industrial competitiveness.

### Security of Supply

An unreliable electricity supply results in additional costs for business, for instance as a result of reduced output. Furthermore, where a constant power supply is particularly important, businesses are faced with the requirement to invest in secondary or back-up equipment that will minimise the impact of a cut in power, but it is costly to purchase, install and maintain.

Of serious and immediate concern to the enterprise base is the deterioration in plant availability in recent months which means that the margin between capacity and demand is tighter than normal at present. If the situation was to deteriorate further, it could lead to a supply-demand imbalance. Costly emergency remedial measures would then need to be invoked to avoid power shortages.

In the medium to longer term, Ireland's increasing reliance on gas for electricity generation - up from 37 percent in 2000 to 51 percent in 2004 - needs to be addressed. The Russia-Ukraine gas dispute in January 2006 and its repercussions throughout Europe highlighted the extent of EU dependency on external supply and its vulnerability to interruptions to that supply.

### Cost Competitiveness

The other critical energy challenge facing the enterprise base in the immediate term is the eroding of our cost competitiveness. Ireland recorded the second highest increase of the EU-15 countries as industrial electricity prices rose by 52.7 percent during the six-year period, 2000-2006, compared to the more modest increase of 28.9 percent in the EU-15.

While there has been a slight improvement in Ireland's comparative performance in the year to 1st January 2006, industrial electricity prices (excluding VAT but including other taxes) here are 16.7 percent above the EU-15 average<sup>1</sup>. Ireland is ranked 3rd of the EU-25 in 2006 - down from 2nd highest the previous year.

Forfás also recognises the need to improve energy efficiency across the enterprise base. Better energy demand management results in lower overall energy costs, lower energy requirements and lower emissions. In its 2005 Energy Efficiency Green Paper, the European Commission maintained that €60 billion could be slashed from the EU energy bill every year and the EU-25 could save one fifth of its energy consumption by 2020 if the Member States were to become more energy efficient. The Government commitment to reduce energy use in Ireland by 20 percent by 2020 is a welcome development.

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<sup>1</sup> Industrial electricity prices are based on annual consumption of 2,000 MWh; maximum demand of 500 kW and annual load of 4,000 hours.

## Main Energy Challenges

From an industrial competitiveness perspective, the main challenges that need to be addressed in the White Paper are:

- Market Structure;
- Interconnection; and
- Fuel Mix.

### Market Structure

Liberalised and competitive markets help security of supply through pro-competitive regulation that sends the right investment signals to industry participants. A regulatory framework that supports competition will also lead to lower prices for end-users. For this competition to work effectively, the market needs to be transparent and predictable and barriers to entry need to be removed. A stable framework for policies and regulation and confidence to leave the market to work are key for the efficient functioning of any energy market.

The Green Paper very clearly sets out the need for structural reform of the electricity market. It also outlines in no uncertain terms the very serious implications of retaining the status quo:

- Improvements in plant availability and efficiency levels will happen over a long period;
- There will be no downward pressure on prices – our fuel mix accounts for over 70 percent of the differential between Irish and European generation costs;
- New entrants will have little incentive to invest at a time when significant increases in power generation capacity is required; and
- Intensive regulation, with all its inherent limitations for all stakeholders will continue.

The Green Paper does put forward some options to reform the electricity market but it does not in our view adequately address industrial competitiveness concerns on the structure of the energy market. While a decision on the optimal market structure for Ireland is a complex issue due to a variety of technical and market factors, the options for market structure reform set out in the Deloitte report should be considered in detail in the context of the White Paper.

The recent announcement from the CER that ESB will close or divest 1,300 MW of existing power plant by 2010 particularly the fact that it will ensure that the appropriate mid-merit plants to reduce ESB's market power are to be disposed of is a positive development. But it is important that is recognised for what it is, a step in the right direction towards encouraging and facilitating real and effective competition in electricity market.

The White Paper also needs to provide more specific objectives and outcome targets regarding generation adequacy and price competitiveness as these are absent in the Green Paper. This is critical to restore industry's confidence in Ireland's ability to meet their energy needs. We would also like to see greater evidence in the White Paper that structural reform will be designed not just

to introduce competition but more importantly to deliver secure, sustainable and competitively priced electricity.

The critical issues that must be addressed in the White Paper are:

- Setting out more specific outcome objectives for price competitiveness and generation adequacy that will influence the choices to be made on market structure;
- Separating ownership of the transmission network from the ESB Group (but retaining it in state ownership) as recommended by the Deloitte analysis to promote competition and investment from new entrants;
- Putting in place the market and regulatory conditions to incentivise new entry, particularly in generation where significant investment in additional capacity is required, for example, ways to minimise the capital, as well as operating, costs of the required new generation plant through a market and regulatory design that minimises long-term investor uncertainty and cost of capital;
- Ways to minimise the amortised capital costs of investment in the transmission network (including interconnection), and a model of price regulation that reflects the lack of risk of investment in these assets; and
- Introducing price differentiation and smart metering (i.e. end-users pay more for electricity at the times during the day when demand is greatest) so as to reduce peak demand and thereby costs for businesses and consumers.

### **Interconnection**

Forfás welcomes the proposals in the Green Paper to build a second North-South interconnector as well as an East-West interconnector. Plans to consider the building of an interconnector to mainland Europe are also welcome. Forfás would also be supportive of the use of exchequer funding to finance major strategic energy investment projects, such as the proposed interconnectors, in the context of NDP 2007-2013, based on a detailed cost-benefit analysis.

More ambitious timelines for interconnection into the UK and continental Europe than those outlined in the Green Paper are required, given the importance of further interconnection for the development of a competitive electricity market, the development of renewables and supply security.

### **Fuel Mix**

The Green Paper proposes an input target of 30 percent for renewable electricity generation capacity by 2020. Given the speed of technological change (e.g. clean coal technology), it should be left to the market to decide, in consultation with the CER and the transmission operator, on the appropriate fuel mix that delivers a reliable and environmentally sustainable supply of energy in the most cost effective way.

Renewables are best supported through support for R&D, adequate grid investment (including interconnection) and by ensuring prices for all fuels reflect their social and environmental costs



## Conclusion

Forfás acknowledges that Ireland's policy and regulatory framework for energy for the future requires immediate reform. The challenges facing energy policymakers in Ireland are considerable, covering a wide range of different areas and a number of difficult economic and organisational problems. Preparing for a world of much higher energy prices, potential fuel shortages and increasing greenhouse gas emissions requires significant policy changes. It is critical for Ireland's future competitiveness and economic success that the White Paper rise to that challenge and set out a clear and unambiguous roadmap from now to 2016 to deliver a competitively priced, secure and environmentally sustainable supply of energy.

We look forward to the publication of the White Paper.

Forfás

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